

Legislation Text

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TRANSPORTATION ADVISORY BOARD AGENDA ITEM

ACTION REQUESTED:

Recommend approval to establish an all-way stop at the intersection of Fairway Drive and Country Club Boulevard.

DEPARTMENT: Transportation, Engineering and Development

SUBMITTED BY: Ashley Hagen, Project Manager

BACKGROUND:

The City has received multiple requests to investigate the establishment of an all-way stop at the intersection of Fairway Drive and Country Club Boulevard. Presently, the intersection is controlled by a two-way stop, with County Club Boulevard stopping for Fairway Drive.

Prior to 2015, Country Club Boulevard terminated at Fairway Drive. However, with the development of the Atwater Subdivision primary access to the development required an extension of Country Club Boulevard west of Fairway Drive. Due to the extension of Country Club Boulevard and the curvature of Fairway Drive, numerous requests for an all-way stop intersection have been submitted due to sight distance concerns when exiting the subdivision traveling east on Country Club Drive.

Fairway Drive and Country Club Boulevard are both classified as a collector roadway according to the City's Master Thoroughfare Plan. A collector roadway is defined by municipal code as a street that connects the local and neighborhood connector streets to the arterial roads. The installation of an all-way stop on two collector roadways is based upon the guidelines and standards outlined in the Federal Highway Administration's *Manual on Uniform Traffic Control Devices (MUTCD)*. Criteria considered in the evaluation of an all-way stop include, but are not limited to:

- Crash History
 - Five or more reported crashes in a 12-month period that are susceptible to correction by a multi-way stop installation.
- Volumes
 - Major Street: at least 300 vehicles per hour for any 8 hours of an average day
 - Minor Street: at least 200 vehicles per hour for any 8 hours of an average day
 - Combined vehicular, pedestrian and bicycle volume entering the intersection from the minor street approaches averages at least 200 units per hours for the same 8 hours
 - 85th percentile approach speed of the major-street traffic exceeds 40 mph.

Additional criteria that may be considered include:

- A. The need to control left-turn conflicts;

- B. The need to control vehicle/pedestrian conflicts near locations that generate high pedestrian volumes;
- C. Locations where a road user, after stopping, cannot see conflicting traffic and is not able to negotiate the intersection unless conflicting cross traffic is also required to stop; and
- D. An intersection of two residential neighborhood collector (through) streets of similar design and operating characteristics where multi-way stop control would improve traffic operational characteristics of an intersection.

In 2014, a Traffic Impact Study was submitted to the City to address the impacts of the Atwater Subdivision development. The study included projected traffic volumes which were developed based upon an increase in existing traffic volumes by one percent per year for six years in an effort to account for growth in the area. According to the study, the projected 2020 traffic volumes were not expected to meet the required MUTCD warrants for the installation of an all-way stop.

DISCUSSION:

On Tuesday, October 10, 2017, City staff evaluated the sight distance at the intersection of Fairway Drive and Country Club Boulevard. The evaluation was based upon the recommended stopping sight distance and design intersection sight distance according to guidelines established by the American Association of State Highway and Transportation Officials (AASHTO).

Stopping sight distance on a roadway should provide a vehicle with a view of the roadway ahead and adequate time to stop before reaching a stationary object in its path. Sight distance should also be provided to allow the driver of the stopped vehicle, such as that on Country Club Boulevard, a sufficient view of the intersection so they may determine when it is appropriate to enter or cross through the intersection. At times the stopping sight distance may need to be enhanced due to the design of the roadway.

Based upon the AASTHO guidelines the stopping sight distance for a 30 mph roadway, such as Fairway Drive, is 200 feet. However, the design intersection sight distance (Case B1 - Left turn from stop) for drivers on Country Club Boulevard is 335 feet. Based upon staff evaluations, vehicles west of Fairway Drive traveling east on Country Club Boulevard do not have adequate sight distance of vehicles traveling northbound on Fairway Drive.

After reviewing the sight distance at the intersection of Fairway Drive and Country Club Boulevard, staff recommends an all-way stop be established at the intersection to allow adequate sight distance for vehicles traveling on Country Club Boulevard. Although volume projections are not expected to meet MUTCD requirements, Options C and D, as described above, are applicable at the intersection of Fairway Drive and Country Club Boulevard.